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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,054	09/28/2001	Fernando A. Mujica	TI-32182	4360

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EXAMINER	
JOSEPH, JAISON	
ART UNIT	**PAPER NUMBER**
2634	

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/966,054	MUJICA, FERNANDO A.	
	Examiner	Art Unit	
	Jaison Joseph	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11,13,14 and 16-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,6,8,11,14 and 17-20* is/are rejected.

7)☒ Claim(s) *2,4,5,7,9,10,13 and 16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 12/20/2005 have been fully considered but they are not persuasive.

Regarding Double Patenting rejection, Applicant arguer that "...obviousness-type patenting rejection of these claims in view of a reference that is do not owned by applicant is not proper...", however, Examiner respectfully disagree. US Patent number 6,804,068 has same inventor and same assignee of the instant application. MPEP further explains in section 804 "... the analysis employed in an obviousness-type double patenting determination parallels the guidelines for a 35 U.S.C. 103(a) rejection, the factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103 are employed when making an obvious-type double patenting analysis...". MPEP explains that 35 USC 103(a) analysis can be used in obviousness double-patenting rejection. Therefore the Double patenting rejection is proper.

Regarding 103 Rejection, Applicant argue that "...in Kung et al there is no option of selecting an order of gain stages...". Examiner respectfully disagrees. Kang et al teach that "...after power-on the total gain is set to a maximum or minimum value depending on the particular implementation of the baseband modem..." (see column 9, lines 25 – 30 and figure 9). Kung et al further teach the selecting an order of gain stages through control lines 832, 848, 864 (see figure 8). Therefore, Kung et al does teach

option of selecting an order of gain stages. Applicant is reminded that Examiner is entitled to give broadest reasonable interpretation to the language of the claims.

Applicant argue that " ... Kung et al does not teach selecting an order for various iteration; second Kung et al does not teach determining a peak and comparing it with the gain of each stage in iteration." Examiner respectfully disagrees. Power detectors (840, 856 and 868) are measuring the output power of each gain stages, which is function of amplitude of the signal, and gain controller 828 provides gain control signal to the plurality of the amplifier stages to increase or decrease their gain stage level depending on the measured value at the power detectors. Therefore Kung et al does teach the cited limitations.

Applicant argue that the reference teach away from each other. Examiner respectfully disagrees. Giebel teach controlling the automatic gain control using the output signal because the output signal have the information of the received signal plus the information about the plurality of the gain stages to compensate for the errors that may occurred during the gain stages. Giebel et al further teach the average peak value of the output voltage is used because it makes the AGC impervious to short duration large excursions of the output voltage which otherwise would introduce large errors in the receivers gain. Therefore Giebel et al does not teach away from each other.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3, 6, 8, 11, 14, and 17 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kang et al. (US Patent 6,498,927) in view of Giebel (US Patent 6073848).

Regarding claim 1, Kang et al teach an analog front end with a plurality of interleaved gain and filter stages, comprising, selecting an order for gain stages to be considered, initializing each of said plurality of gain stages to respective minimal gain setting, wherein each gain stage has plurality of incremental gain settings, and for a first iteration of each gain stage in said selected order, increasing a corresponding gain setting by one increment, determining the peak of the signal for present gain setting, if the peak is greater than a peak target reduce said gain setting by one increment and proceed to next gain stage in said selected gain stage order, otherwise increase said gain setting by one increment and return to said act of determining the peak (see figure 8, and column 9, line 22 – column 10 line 37). Kang et al failed to disclose determining the peak average of a plurality of data frames received by the analog front end. However, Giebel teaches that determining the peak average of a plurality of data frames to control the gain settings (see column 1, line 59 – column 2, line 15). Therefore it would be obvious to an ordinary skilled in the art at the time the invention was made to use the peak average instead of peak of the signal to control the gain setting to reduce the impervious to short duration large excursions of the output voltage which otherwise would introduce large errors in receiver gain (see column 2, lines 16 – 19).

Regarding claim 3, which inherits the limitations of claim 1, Kang et al teach that resetting a gain stage counter to begin with first gain stage in said selected (see column 12 lines 8 – 42).

Regarding claim 6, which inherits the limitations of claim 1, Kang et al teach second iteration of each gain stage in said selected order comprising increasing a maximum gain setting and repeating said first iteration of each gain stage (see column 9, line 22 – column 10, line 37).

Regarding claim 8, which inherits the limitations of claim 1, Kang et al teach subsequent iterations of each gain stage in said selected order comprising increasing a maximum gain setting and repeating said first iteration of each gain stage (see column 9, line 22 – column 10, line 37).

Regarding claim 11, claimed method including the features corresponding to subject matter mentioned above rejection of claim 1 is applicable hereto.

Regarding claim 14, which inherits the limitations of claim 11, claimed method including the features corresponding to subject matter mentioned above rejection of claim 6 is applicable hereto.

Regarding claim 17, which inherits the limitations of claim 11, claimed method including the features corresponding to subject matter mentioned above rejection of claim 8 is applicable hereto.

Regarding claim 18, claimed method including the features corresponding to subject matter mentioned above rejection of claim 6 is applicable hereto.

Regarding claim 19, which inherits the limitations of claim 18, Kang et al. teach gain stages comprise programmable gain amplifiers (see figure 8).

Regarding claim 20, which inherits the limitations of claim 18, Kang et al teach that the processor comprises a digital signal processor (see figure 8).

Double Patenting

Claims 1 and 11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 17 of U.S. Patent No. 6,840,068 in view of Giebel (US Patent 6073848).

Although the conflicting claims are not identical, they are not patentably distinct from each other because both the claim 1 of instant application and claim 17 of patent claim a method for gain control in a digital subscriber line system with plurality of interleaves gain and filter stages, comprising selecting an order for said gain stages, initializing each of said plurality of gain stages to respective minimal gain setting, wherein each gain stage has a plurality of incremental gain settings; and for a first iteration each gain stages in said selected order, increasing a corresponding gain setting by one increment; and if gain is greater than a peak target, reduce said gain setting by one increment and proceed to next gain stage in said selected gain stage order; otherwise increase said gain setting by one increment. Claim 17 of the patent does not recite the limitation of determining the peak average of a plurality of data frames. However, Giebel teaches that determining the peak average of a plurality of data frames to control the gain settings (see column 1, line 59 – column 2, line 15).

Therefore it would be obvious to an ordinary skilled in the art at the time the invention was made to use the peak average instead of peak of the signal to control the gain setting to reduce the impervious to short duration large excursions of the output voltage which otherwise would introduce large errors in receiver gain (see column 2, lines 16 – 19).

Regarding claim 11, claimed method including the features corresponding to subject matter mentioned above rejection of claim 1 is applicable hereto.

Allowable Subject Matter

Claims 2, 4, 5, 7, 9, 10, 13, and 16are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

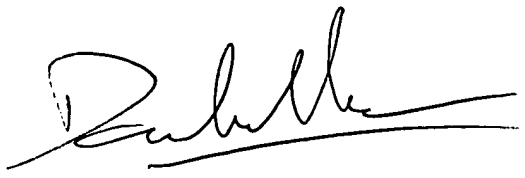
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaison Joseph whose telephone number is (571) 272-6041. The examiner can normally be reached on M-F 8:30 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jaison Joseph
02/13/2006



DAC HA
PRIMARY EXAMINER